

WHAT IS CLAIMED IS:

1. A circuit simulating apparatus analyzing a circuitry having a main circuit and an unnecessary circuit connected by a circuit switching element, comprising:

5 a netlist extracting unit extracting a netlist from a circuit diagram data;

a designating unit designating an element between the main circuit and the unnecessary circuit;

10 an unnecessary circuit disconnecting unit forming a netlist with the unnecessary circuit disconnected, from the netlist extracted by said netlist extracting unit, based on the element designated by said designating unit;

a simulation input file forming unit forming a simulation input file, with reference to the netlist formed by said unnecessary circuit disconnecting unit, a model parameter and an analysis condition; and

15 a circuit simulating unit performing a circuit simulation using the simulation input file formed by said simulation input file forming unit.

2. The circuit simulating apparatus according to claim 1, wherein said designating unit includes an unnecessary circuit disconnecting terminal designating unit designating an unnecessary circuit disconnecting terminal; and

5 said unnecessary circuit disconnecting unit forms the netlist with the unnecessary circuit disconnected from the netlist extracted by said netlist extracting unit, based on the unnecessary circuit disconnecting terminal designated by said unnecessary circuit disconnecting terminal designating unit.

3. The circuit simulating apparatus according to claim 2, further comprising

5 a circuit recognizing unit recognizing whether the unnecessary circuit disconnecting terminal designated by said unnecessary circuit disconnecting terminal designating unit is on the main circuit side or the

unnecessary circuit side; wherein

said unnecessary circuit disconnecting unit adds a description for connecting the unnecessary circuit disconnecting terminal recognized to be on the side of the unnecessary circuit by said circuit recognizing unit to a power supply or to the ground, and adds a description for disconnecting connection with said unnecessary circuit, on the netlist extracted by said netlist extracting unit.

4. The circuit simulating apparatus according to claim 2, further comprising

a circuit recognizing unit for recognizing whether the unnecessary circuit disconnecting terminal designated by said unnecessary circuit disconnecting terminal designating unit is on the main circuit side or on the unnecessary circuit side; wherein

said unnecessary circuit disconnecting unit adds a description for disconnecting connection between the unnecessary circuit disconnecting terminal on the main circuit side with the circuit switching element on the netlist extracted by said netlist extracting unit, when the unnecessary circuit disconnecting terminal recognized to be on the side of the main circuit by said circuit recognizing unit is connected to a plurality of elements of the main circuit.

5. The circuit simulating apparatus according to claim 1, wherein said designating unit includes a circuit switching element specifying unit specifying a circuit switching element; and

said unnecessary circuit disconnecting unit forms a netlist with the unnecessary circuit disconnected from the netlist extracted by said netlist extracting unit, based on the circuit switching element specified by said circuit switching element specifying unit.

6. The circuit simulating apparatus according to claim 5, further comprising

a circuit recognizing unit recognizing whether the unnecessary

5 circuit disconnecting terminal connected to the circuit switching element specified by said circuit switching element specifying unit is on the main circuit side or the unnecessary circuit side; wherein

10 said unnecessary circuit disconnecting unit adds a description for connecting the unnecessary circuit switching terminal recognized to be on the unnecessary circuit side by said circuit recognizing unit to a power supply or the ground, and adds a description for disconnecting connection with said unnecessary circuit, on the netlist extracted by said netlist extracting unit.

7. The circuit simulating apparatus according to claim 5, further comprising

5 a circuit recognizing unit for recognizing whether the unnecessary circuit disconnecting terminal designated by said unnecessary circuit disconnecting terminal designating unit is on the main circuit side or on the unnecessary circuit side; wherein

10 said unnecessary circuit disconnecting unit adds a description for disconnecting connection between the unnecessary circuit disconnecting terminal on the main circuit side with the circuit switching element on the netlist extracted by said extracting unit, when the unnecessary circuit disconnecting terminal recognized to be on the side of the main circuit by said circuit recognizing unit is connected to a plurality of elements of the main circuit.

8. A method of circuit simulation, analyzing a circuitry having a main circuit and an unnecessary circuit connected by a circuit switching element, comprising the steps of:

5 extracting a netlist from circuit diagram data:

designating an element between the main circuit and the unnecessary circuit;

forming a netlist with the unnecessary circuit disconnected from said extracted netlist, based on said designated element;

forming a simulation input file with reference to said formed netlist,

10 a model parameter and an analysis condition; and  
performing a circuit simulation using said formed simulation input  
file.

9. The method of circuit simulation according to claim 8, wherein  
said step of designating an element between said main circuit and  
the unnecessary circuit includes the step of designating an unnecessary  
circuit disconnecting terminal; and

5 said step of forming a netlist with the unnecessary circuit  
disconnected from said extracted netlist includes the step of forming a  
netlist with the unnecessary circuit disconnected from said extracted netlist,  
based on said designated unnecessary circuit disconnecting terminal.

10. The method of circuit simulation according to claim 9 further  
comprising the step of

recognizing whether said designated unnecessary circuit  
disconnecting terminal is on the main circuit side or on the unnecessary  
circuit side; wherein

5 said step of forming a netlist with the unnecessary circuit  
disconnected from said extracted netlist includes the step of adding a  
description for connecting the unnecessary circuit disconnecting terminal  
recognized to be on the unnecessary circuit side to a power supply or to the  
10 ground, and adding a description for disconnecting connection with said  
unnecessary circuit, on said extracted netlist.

11. The method of circuit simulation according to claim 9, further  
comprising the step of

recognizing whether said designated unnecessary circuit  
disconnecting terminal is on the main circuit side or on the unnecessary  
circuit side; wherein

5 said step of forming a netlist with the unnecessary circuit  
disconnected from said extracted netlist includes the step of adding a  
description for disconnecting connection of the unnecessary circuit

disconnecting terminal on the main circuit side and the circuit switching  
10 element, on said extracted netlist, when the unnecessary circuit  
disconnecting terminal recognized to be on the main circuit side is connected  
to a plurality of elements of the main circuit.

12. The method of circuit simulation according to claim 8, wherein  
said step of designating an element between said main circuit and  
the unnecessary circuit includes the step of specifying a circuit switching  
element; and

5 said step of forming a netlist with the unnecessary circuit  
disconnected from said extracted netlist includes the step of forming a  
netlist with the unnecessary circuit disconnected from said extracted netlist,  
based on said specified circuit switching element.

13. The method of circuit simulation according to claim 12, further  
comprising the step of

recognizing whether the unnecessary circuit disconnecting terminal  
connected to said specified circuit switching element is on the main circuit  
5 side or on the unnecessary circuit side; wherein

said step of forming a netlist with the unnecessary circuit  
disconnected from said extracted netlist includes the step of adding a  
description for connecting the unnecessary circuit disconnecting terminal  
recognized to be on the unnecessary circuit side to a power supply or to the  
10 ground, and adding a description for disconnecting connection with said  
unnecessary circuit, on said extracted netlist.

14. The method of circuit simulation according to claim 12, further  
comprising the step of

recognizing whether said the unnecessary circuit disconnecting  
terminal connected to said specified circuit switching element is on the main  
5 circuit side or on the unnecessary circuit side; wherein said step of  
forming a netlist with the unnecessary circuit disconnected from said  
extracted netlist includes the step of adding a description for disconnecting

connection between the unnecessary circuit disconnecting terminal on the main circuit side and circuit switching element, on said extracted netlist, when the unnecessary circuit disconnecting terminal recognized to be on the main circuit side is connected to a plurality of elements of the main circuit.

15. A computer readable recording medium recording a program to have a computer execute a method of circuit simulation analyzing a circuitry having a main circuit and an unnecessary circuit connected by a circuit switching element, wherein

said method of circuit simulation including the steps of:  
extracting a netlist from circuit diagram data;  
designating an element between the main circuit and the unnecessary circuit;  
forming a netlist with the unnecessary circuit disconnected from said extracted netlist, based on said designated element;  
forming a simulation input file with reference to said formed netlist, a model parameter and an analysis condition; and  
performing a circuit simulation using said formed simulation input file.

16. The computer readable recording medium according to claim 15, wherein

said step of designating an element between said main circuit and the unnecessary circuit includes the step of designating an unnecessary circuit disconnecting terminal; and

said step of forming a netlist with the unnecessary circuit disconnected from said extracted netlist includes the step of forming a netlist with the unnecessary circuit disconnected from said extracted netlist, based on said designated unnecessary circuit disconnecting terminal.

17. The computer readable recording medium according to claim 16, wherein

said method of circuit simulation further includes the step of

5 recognizing whether said designated unnecessary circuit disconnecting  
terminal is on the main circuit side or on the unnecessary circuit side; and  
said step of forming a netlist with the unnecessary circuit  
disconnected from said extracted netlist includes the step of adding a  
description for connecting the unnecessary circuit disconnecting terminal  
10 recognized to be on the unnecessary circuit side to a power supply or to the  
ground, and adding a description for disconnecting connection with said  
unnecessary circuit, on said extracted netlist.

18. The computer readable recording medium according to claim 16,  
wherein

5 said method of circuit simulation further includes the step of  
recognizing whether said designated unnecessary circuit disconnecting  
terminal is on the main circuit side or on the unnecessary circuit side; and  
said step of forming a netlist with the unnecessary circuit  
disconnected from said extracted netlist includes the step of adding a  
description for disconnecting connection of the unnecessary circuit  
10 disconnecting terminal on the main circuit side and the circuit switching  
element, on said extracted netlist, when the unnecessary circuit  
disconnecting terminal recognized to be on the main circuit side is connected  
to a plurality of elements of the main circuit.

19. The computer readable recording medium according to claim 15,  
wherein

5 said step of designating an element between said main circuit and  
the unnecessary circuit includes the step of specifying a circuit switching  
element; and

said step of forming a netlist with the unnecessary circuit  
disconnected from said extracted netlist includes the step of forming a  
netlist with the unnecessary circuit disconnected from said extracted netlist,  
based on said specified circuit switching element.

20. The computer readable recording medium according to claim 19,

wherein

said method of circuit simulation further includes the step of recognizing whether the unnecessary circuit disconnecting terminal connected to said specified circuit switching element is on the main circuit side or on the unnecessary circuit side; and

said step of forming a netlist with the unnecessary circuit disconnected from said extracted netlist includes the step of adding a description for connecting the unnecessary circuit disconnecting terminal recognized to be on the unnecessary circuit side to a power supply or to the ground, and adding a description for disconnecting connection with said unnecessary circuit, on said extracted netlist.